

견관절에서의 상완골두치환술의 이용

울산대학교 서울 중앙병원 정형외과학교실

전 재 명

외상이나 관절염 또는 종양등으로 관절의 파괴가 심한 경우에 동통을 경감시키고 기능을 회복시키기 위해서 관절의 치환술이 사용되는 경우가 많다. 견관절은 특이한 해부학적 구조 및 생역학적인 기능을 가지고 있기 때문에 상완골두만을 치환하는 수술로도 동통을 경감시키고 기능의 회복을 도모하고자 하는 목적을 어느정도 달성할 수 있는 경우가 많다.

저자는 지난 3년 동안 29예의 상완골두 치환술을 경험하여, 이들 예를 중심으로 수술의 적응증, 각 질환의 특성, 질환에 따른 수술의 차이점등에 대해서 논하고자 한다.

REPLACEMENT ARTHROPLASTY

Highly Successful

Hemiarthroplasty

Total Shoulder Arthroplasty

TREATMENT OPTIONS

Fibular Transfer

Resection Arthroplasty

Resection Interposition Arthroplasty

Arthrodesis

Clavicle Transfer

Allograft

HISTORY

Mythical Age

First TSA : J.E. Pean, 1893

Modern Age

Neer : Hemiarthroplasty, 1955

INDICATIONS : PAIN

Arthritic Conditions

DA, RA, AVN

Trauma

Tumor

MODULAR SYSTEM

Advantage

Soft Tissue Balance

Revision

Disadvantage : Disassembly

PREOPERATIVE CONSIDERATIONS

Diagnosis

Stage of Disease

Conservative Tx.

Other Surgical Methods

PATIENT CONSIDERATIONS

General Medical Condition

Realistic Goals

Risks

Cooperation

SPECIAL CONSIDERATIONS

Deltoid Function

Rotator Cuff

Bone Stock

Skin

RADIOLOGIC EXAM.

True AP & Axillary Lat.

CT of Both Shoulders

Joint Space

Osteophyte

Position of Tuberosities

Erosion of Glenoid

CAPSULECTOMY

Prevention of Stiffness

Risk of Instability ???

PREPARATION OF HUMERUS

Very Important Step

Retroversion : 30~ 35 degrees

Individualize

Do Not Resect Too Much Bone

Be Careful Intraop. Fx.

HUMERAL COMPONENT

Thickest Stem

Thicker Head & Longer Neck

Increase Tension

Longer Lever Arm

Smaller Head

More Translation

Easier Rotator Cuff Closure

CHECKPOINTS

HH : A Few mm Above the GT

HH : Level of Glenoid, Direct to Glenoid

Posterior Translation : Up To 50%

Inferior Translation : Up To 30%

Arm : Complete Rest on the Abdomen

30° E/R : No Tension on Subscapularis

GLENOID PRESERVATION

Avoid Unnecessary Glenoid Replacement

Short Op. Time

Elimination of Potential Problems

Similar Functional Result To TSA

Greater Actiity Range

DISADVANTAGE OF HEMI.

- Incomplete Pain Relief in Some Pts.
- Long Term Effect of Cartilage Wear ?

CONTRAINDICATIONS

- Loss of Deltoid & Rotator Cuffs
- Severe Brachial Plexus Injuries
- Active Infection
- Neuropathic Joints
- Uncooperative Patients

DEGENERATIVE ARTHRITIS

- Usually Intact Rotator Cuff
- Wearing of Posterior Glenoid
- Circumferential Osteophyte
- S/P Instability : More Erosion

RHEUMATOID ARTHRITIS

- Problem of Rotator Cuff
 - Rocking Horse Glenoid
- Erosion of Glenoid Medially
- Osteoporosis
 - Cement
- Considerations of Other Joints

ROTATOR CUFF

- Integrity of the rotator cuff is the single most important factor determining improvement in postoperative range of motion.
- Nonreconstructable Cuff Damage
 - Hemiarthroplasty
 - Do Not Resect CA Lig.

FRACTURE

- 4-P, Head Split & 2-P AN., 3-P in Elderly
- Nonunion in Osteoporotic Bone
- Traumatic arthritis
 - Length of the Humerus, Retroversion
 - Union between Tuberosities & Shaft
 - Deformity Correction
 - Moving Planes

TUMOR

- Palliative Surgery
- Limb Salvage Operation

Autograft
Allograft
Muscle-Sling Prosthesis
Custom Made Prosthesis

COMPLICATIONS

Loosening
Nerve Injury
Infection
Instability
Fracture
Ectopic Ossification

SHOULDER ARTHROPLASTY

Primarily A Soft Tissue Procedure
Patient Selection
Preoperative planning
Strict Attention to Surgical Detail
Aggressive Postoperative Care